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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,086	07/12/2001	Thomas H. Peter	142-96 DIV (0008UPDIV)	3055

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MICHAEL E. CARMEN, ESQ.  
DILWORTH & BARRESE, LLP  
333 Earle Ovington Blvd.  
Uniondale, NY 11553

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 07/30/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.  
09/904,086

Applicant(s)  
Peter et al.

Examiner  
Rabon Sergent

Art Unit  
1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on May 13, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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1. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to clearly define exactly what is meant by the language, “substantially linear isocyanate-terminated polyurethane prepolymer”. The examiner has considered applicants’ response; however, it remains unclear with respect to the level or extent of branching that is provided for by the “substantially” language. Applicants have argued that the specification teaches one how to prepare such a prepolymer; however, the specification serves only to teach one how to produce a linear prepolymer; the permissible level of branching is not discussed.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As aforementioned, it is unclear how “substantially” is to modify “linear”.

Furthermore, the use of “about” within the language, “less than about 250”, renders the claims indefinite, because “about” encompasses values slightly above 250; therefore, it is unclear if the language actually encompasses values of 250 or slightly above.

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Applicants' argument that the language has appeared in previous patents is insufficient. Each situation is handled on a case by case basis. Applicants' response has not addressed the issues raised by the examiner.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okazaki et al. ('623) or Koyama et al. ('399), each in view of Gajewski ('689 or '806) or Kulp et al. ('488) or Ruprecht et al.

The primary references disclose the coating of flexible substrates with linear polyurethane prepolymers, which are cured with chain extenders, such as diols and diamines.

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5. The primary references fail to disclose the use of a rotational casting method; however, such methods were known to be useful for casting polyurethanes, having relatively rapid or controlled reaction profiles. This position is supported by the teachings of the secondary references. The position is taken that it would have been obvious to select a rotational casting process from the known field of polyurethane casting techniques, so as to arrive at the claimed method.

6. Furthermore, while the primary references fail to specifically recite the use of a secondary aliphatic amine with a diol chain extender to cure the prepolymer, patentees do disclose secondary amine chain extenders, such as piperazine. Since it has long been known that cure or reaction profiles of polyurethanes can be controlled based on the reactivity of the chain extender, the position is taken that it would have been obvious to tailor the reaction profiles, depending on the requirements of the rotational casting process, by using blends of curing agents, including the disclosed diols and secondary amines, so as to arrive at the instant invention. Furthermore, it would have been obvious to select foams as being suitable substrates for the production of the composites, since the application of coverings or skins to foams has long been known in the art.

7. Applicants have argued that the references fail to render obvious the coating of flexible substrates with polyurethanes by a rotational casting method. In response, the term "flexible" is a relative term; no definitive or quantitative limitations have been provided that conclusively exclude the substrates of the secondary references. Applicants have not established that the

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methods of the secondary references exclude "flexible" substrates or would not be expected to work with "flexible" substrates.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.

R. Sergent

July 28, 2002

  
RABON SERGENT  
PRIMARY EXAMINER